

THE INVENTION CLAIMED IS:

1. A method of testing an integrated circuit comprising:
providing a semiconductor substrate having a semiconductor device provided thereon;
forming a first dielectric layer over the semiconductor substrate;
5 forming a first channel in the first dielectric layer in contact with the semiconductor device;
forming a first contact pad mask layer;
forming a first contact pad in the first contact pad mask layer in contact with the first channel;
10 using the first contact pad to test the first channel and the semiconductor device; and
removing the first contact pad mask layer and the first contact pad.
2. The method as claimed in claim 1 additionally comprising:
using a tester having a microprobe; and
wherein:
15 using the first contact pad includes forming the first contact pad for contact by the microprobe.
3. The method as claimed in claim 1 additionally comprising:
forming the first contact pad mask layer uses a photoresist.
4. The method as claimed in claim 1 additionally comprising:
20 forming the first contact pad forms a material selected from a group consisting of copper, aluminum, gold, silver, a compound thereof, and a combination thereof.
5. The method as claimed in claim 1 wherein:
removing the first contact pad mask layer and the first contact pad uses polishing.
- 25 6. The method as claimed in claim 1 additionally comprising:
forming a second dielectric layer over the semiconductor substrate;
forming a second channel in the second dielectric layer in contact with the semiconductor device;
forming a second contact pad mask layer;
30 forming a second contact pad in the second contact pad mask layer in contact with the channel;

using the second contact pad to test the second channel; and
removing the second contact pad mask layer and the second contact pad.

7. The method as claimed in claim 6 additionally comprising:
using a tester having a microprobe; and

5 wherein:

using the second contact pad includes forming the second contact pad for contact by
the microprobe.

8. The method as claimed in claim 6 additionally comprising:
forming the second contact pad mask layer uses a photoresist.

10 9. The method as claimed in claim 6 additionally comprising:
forming the second contact pad uses a material selected from a group consisting of
copper, aluminum, gold, silver, a compound thereof, and a combination
thereof.

10. The method as claimed in claim 6 wherein:

15 removing the second contact pad mask layer and the second contact pad uses
polishing.

11. The method as claimed in claim 1 additionally comprising:
forming a via dielectric layer over the semiconductor substrate;
forming a via in the via dielectric layer in contact with the semiconductor device;
20 forming a second dielectric layer over the via dielectric layer;
forming a second channel in the second dielectric layer contiguous with the via;
forming a second contact pad mask layer;
forming a second contact pad in the second contact pad mask layer in contact with the
second channel;

25 using the second contact pad to test the via and second channel; and
removing the second contact pad mask layer and the second contact pad.

12. The method as claimed in claim 11 additionally comprising:
using a tester having a microprobe; and
wherein:

30 using the second contact pad includes forming the second contact pad for contact by
the microprobe.

13. The method as claimed in claim 11 additionally comprising:
forming the second contact pad mask layer uses a photoresist.

14. The method as claimed in claim 11 additionally comprising:
forming the second contact pad forms a material selected from a group consisting of
5 copper, aluminum, gold, silver, a compound thereof, and a combination
thereof.

15. The method as claimed in claim 11 wherein:
removing the second contact pad mask layer and the second contact pad uses
polishing.

10 16. A method of testing an integrated circuit comprising:
providing a semiconductor substrate having a semiconductor device provided thereon;
forming a device dielectric layer over the semiconductor substrate by deposition;
forming a first dielectric layer over the device dielectric layer by deposition;
forming a contact to the semiconductor device in the device dielectric layer;
15 forming a first channel in the first dielectric layer in contact with the contact;
forming a via dielectric layer over the first dielectric layer;
forming a via in the via dielectric layer in contact with the first channel;
forming a second dielectric layer over the via dielectric layer;
forming a second channel in the second dielectric layer contiguous with the via;
20 forming a contact pad mask layer over a layer selected from the group consisting of
the first dielectric layer, the via layer, the second dielectric layer, and a
combination thereof;
forming a contact pad in the contact pad mask layer in contact with an element
selected from a group consisting of the first channel, the via, the second
25 channel, and a combination thereof;
using the contact pad to test an element from a group consisting of the semiconductor
device, the contact, the first channel, the via, the second channel, and a
combination thereof; and
removing the contact pad mask layer and the contact pad; and
30 completing the integrated circuit.

17. The method as claimed in claim 16 additionally comprising:
using a tester having a microprobe; and

wherein:

forming the contact pad includes forming the contact pad for contact by the microprobe.

18. The method as claimed in claim 16 additionally comprising:

5 forming the contact pad mask layer uses a photoresist.

19. The method as claimed in claim 16 wherein:

forming the contact pad forms a material selected from a group consisting of copper, aluminum, gold, silver, a compound thereof, and a combination thereof.

20. The method as claimed in claim 16 wherein:

10 removing the contact pad mask layer and the contact pad uses chemical mechanical polishing.